

AMENDMENTS TO THE DRAWINGS

Applicant submits herewith replacement drawing sheets for FIGS. 9, 10, 13, 14, 16, 23, and 24. No new matter has been added by way of this amendment.

Applicant's specification refers to "connector 107" in the description of both FIG. 9 and FIG. 10. However, reference number "107" was inadvertently omitted from FIGS. 9 and 10. The attached sheets include new versions of FIGS. 9 and 10 incorporating the omitted reference number "107." In addition, Applicant's specification refers to "button moldings 100, 102" in the description of FIG. 10. However, reference numbers "100" and "102" were inadvertently omitted from FIG. 10. The new version of FIG. 10 included in the attached sheets also incorporates the omitted reference numbers "100" and "102."

Applicant's specification refers to "connector 113" in the description of both FIG. 13 and FIG. 14. However, reference number "113" was inadvertently omitted from FIGS. 13 and 14. The attached sheets include new versions of FIGS. 13 and 14 incorporating the omitted reference number "113." In addition, Applicant's specification refers to "display circuit board 104" and "antenna circuit board 106" in the description of FIG. 14. However, the display circuit board illustrated by FIG. 14 was inadvertently improperly identified with reference number "106" and the antenna circuit board illustrated by FIG. 14 was inadvertently improperly identified with reference number "104." The new version of FIG. 14 included in the attached sheets replaces the incorrect reference number "104" with the correct reference number "106" for the antenna circuit board, and replaces the incorrect reference number "106" with the correct reference number "104" for the display circuit board.

Applicant's specification refers to "antenna circuit board 106" in the description of FIG. 16. However, the antenna circuit board illustrated by FIG. 16 was inadvertently improperly identified with reference number "104." The attached sheets include a new version of FIG. 16 that replaces the incorrect reference number "104" with the correct reference number "106" for the antenna circuit board. In addition, Applicant's amended specification refers to "antenna circuit board 106" in the description of FIGS. 23 and 24. However, the antenna circuit board illustrated by FIGS. 23 and 24 was inadvertently improperly identified with reference number "104." The attached sheets include new versions of FIGS. 23 and 24 that replace the incorrect reference number "104" with the correct reference number "106" for the antenna circuit board.

To summarize, the attached sheets include a new version of FIG. 9 incorporating the omitted reference number "107," a new version of FIG. 10 incorporating the omitted reference numbers "100", "102", and "107," a new version of FIG. 13 incorporating the omitted reference number "113," a new version of FIG. 14 incorporating the omitted reference number "113" and correcting the reference numbers for display circuit board "104" and antenna circuit board "106," and new versions of FIGS. 16, 23, and 24 correcting the reference number for antenna circuit board "106."

Attachment: Replacement Sheets (7)

REMARKS

In response to the Office Action dated March 31, 2006, Applicant respectfully requests reconsideration in view of the following remarks. Claim 23 has been amended to delete, "a first circuit board within the programmer housing" and "second circuit board within the programmer housing," which are introduced in claim 22. Claims 12 and 31 were previously canceled and claims 1-11, 13-30, and 32-35 are pending.

The specification and FIGS. 9, 10, 13, 14, 16, 23, and 24 have been amended to correct inadvertent typographical errors.

Claim Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1-3, 5, 7, 10, 11, 13-19, 21-24, 27, 30 and 32-35 under 35 U.S.C. 103(a) as being unpatentable over Fang et al. (US 6,678,563) in view of Nelson et al. (US 6,418,346). The Examiner also rejected claims 4 and 20 under 35 U.S.C. 103(a) as being unpatentable over Fang et al. (US 6,678,563) in view of Nelson et al. (US 6,418,346) and further in view of Lebel et al. (US 2003/0065308). The Examiner also rejected claims 6, 8, 9, 26, 28 and 29 under 35 U.S.C. 103(a) as being unpatentable over Fang et al. (US 6,678,563) in view of Nelson et al. (US 6,418,346) and further in view of Stein et al. (US 2004/0230246).

Applicant respectfully traverses the rejections. The applied references fail to disclose or suggest the inventions defined by Applicant's claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

For example, with respect to the rejection of independent claim 1, neither Fang et al. nor Nelson et al. teach or suggest a medical device programmer including an internal antenna mounted on a first circuit board within a programmer housing, and a display mounted on a second circuit board within the programmer housing. Applicant's claim 1 also recites a relationship between the first and second circuit boards in which the major planes of the first and second circuit boards are generally parallel to one another, and are disposed at a fixed separation distance relative to one another within the programmer housing. Fang et al. and Nelson et al. are also silent as to the relationship between the first and second circuit boards. As a result, claim 1

is patentable over Fang et al. in view of Nelson et al. Claims 2-11 and 13-18 depend from claim 1 and are allowable therewith.

As the Office Action states, "Fang et al. describes the display 32 being mounted to the same circuit board 38 as the transceiver," rather than separate circuit boards, as Applicant's claim 1 requires. The Examiner looked to Nelson et al. to cure this deficiency in Fang et al. However, nothing in Nelson et al. teaches or suggests the particular structural arrangement required by Applicant's claim 1. Nelson et al. only states that a transceiver 86 is mounted to an antenna driver circuit board 34 and a display screen is controlled by a graphics circuit. (Col. 11, lines 52-55; col. 12, lines 15-18). Nelson et al. makes no mention of an internal antenna mounted on the antenna driver circuit board 34, and fails to describe the mounting of a display screen on a circuit board other than the antenna driver circuit board 34. The Nelson et al. reference merely states that the display screen is controlled by a graphics circuit. It does not necessarily follow, then, that the display screen is mounted on a circuit board separate from the antenna driver circuit board 34. The Nelson et al. reference does not even disclose two circuit boards mounted within the programmer housing.

The fact that a certain characteristic may be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993); MPEP 2112. The Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original); MPEP 2112. No reasonable support has been provided for the determination that an antenna and display screen in Nelson et al. are mounted on first and second circuit boards, respectively.

Furthermore, in the Nelson et al. disclosure, an external telemetry antenna 24 is coupled to the transceiver 86, rather than an internal antenna, as recited by Applicant's claim 1. (Col. 11, lines 52-55). Nothing in Nelson et al. even suggests a programmer with an internal antenna, much less an internal antenna and display mounted on separate circuit boards.

In the present Office Action, the Examiner cited no prior art teaching that would have provided a motivation for modifying the programmers of Fang et al. and Nelson et al. to include an internal antenna and display mounted on separate circuit boards, as recited by Applicant's

claim 1. The conclusion of obviousness advanced by the Examiner relied on a motivation that has no nexus to the features required by Applicant's claims. In particular, the Examiner stated that the necessary modifications would have been desirable "in order to realize different circuit configurations and placement of circuit components to accommodate the handling of one or more function specific controls."

The vague and open-ended motivation identified by the Examiner would have provided no guidance to one of ordinary skill in the art concerning the specific modifications that would have been necessary to arrive at the claimed invention, nor any reason why such modifications would have been desirable, particularly in the absence of a pertinent teaching in the applied references. The Examiner failed to explain why one of ordinary skill in the art would have considered it desirable to mount an internal antenna on a first circuit board and a display on a second circuit board within a medical device programmer.

In addition, Applicant objects to the Examiner's characterization of the claimed invention as merely "constructing a formerly integral structure in various elements." The claimed invention defines components and a particular structural relationship among such components that are neither disclosed nor suggested in the prior art of record. The requirements of the claimed invention do not amount to a mere decoupling of components that were previously integrated, as suggested by the Examiner.

The skilled person, without access to Applicant's disclosure, would not have appreciated the advantages of a programmer including a display and internal antenna mounted on separate circuit boards, as defined by Applicant's claim 1. In particular, Nelson et al. and Fang et al. do not contemplate that such an arrangement can be effective in achieving a reduction in electrical and electromagnetic interference during telemetry sessions using the internal antenna. This is especially true because Nelson et al. does not even disclose a programmer with an internal antenna, and therefore has no regard for the interference problems posed by such an arrangement.

As described in Applicant's disclosure, it is desirable to integrate the antenna and display within the programmer housing for purposes of compactness. (See paragraph 9 at page 2). Yet, when the display and internal antenna are located near each other, poor communication between an implantable medical device and the programmer can result from a number of electronic issues, such as interference caused by the display. (See paragraph 9 at page 2).

With separate circuit boards disposed in parallel, at a fixed separation distance, the internal antenna can be physically displaced from the display, significantly reducing electrical noise. In this manner, the placement of the antenna and display on separate circuit boards, and the resulting separation distance, can support more reliable telemetry in a medical device programmer while achieving a programmer with reduced size and compactness. The cited art fails to recognize this advantage.

The Court of Appeals for the Federal Circuit has made clear that motivation to combine references must be found in the prior art, and that it is impermissible hindsight for the Examiner to use the motivation stated in Applicant's own disclosure as a blueprint to reconstruct the claimed invention from the prior art.¹ It is improper to point to teachings of motivation contained within Applicant's own disclosure.² Moreover, it is insufficient to merely pull such motivation out of thin air. Rather, the Examiner's rejection must be based on substantial evidence in the record demonstrating that the motivation for making the claimed invention resides in the prior art.³

In summary, the Examiner's conclusion of obviousness, and particularly the cited motivation to modify Fang et al. in view of Nelson et al., is unsupported by any substantial evidence in the record.

Applicant's independent claim 19 is directed towards a method that utilizes a medical device programmer including antenna mounted internally on a first circuit board within the programmer and a display mounted internally on a second circuit board within the medical device programmer. Applicant's independent claim 22 is directed toward a programmer for an implantable neurostimulator, where the programmer includes an internal antenna mounted within the programmer housing on a first circuit board and a display mounted within the programmer housing on a second circuit board. For the same reasons given above with respect to claim 1, claims 19 and 22, as well as claims 20-21, which depend from claim 19, and claims 23-30 and 32-35, which depend from claim 22, are patentable over Fang et al. in view of Nelson et al.

¹ See *Interconnect Planning Corp. v. Feil*, 227 USPQ 543 (CAFC 1985); see also *In re Fine*, 5 USPQ2d 1596, 1598 (CAFC 1988); see also *In re Gorman*, 18 USPQ 2d 1885, 1888 (CAFC 1991); see also *Al-Site Corp. v. VSI International, Inc.*, 50 USPQ2d 1161, 1171 (CAFC 1999).

² *In re Oetiker*, 24 USPQ2d at 1445.

³ *In re Lee*, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002); *In re Chu*, 36 USPQ2d at 1094.

In view of the fundamental deficiencies evident in Fang et al. and Nelson et al., it is not necessary to discuss in detail the additional patentable differences presented by the various dependent claims. In reserving comment, however, Applicant neither admits nor acquiesces in the Examiner's interpretation with respect to the teachings in such applied references or with respect to any features set forth in the dependent claims.

However, Applicant notes that with respect to the rejection of dependent claims 2 and 23, the cited art also fails to teach or suggest a configuration in which the first circuit board includes telemetry circuitry coupled to the internal antenna and the second circuit board includes display circuitry. In Fang et al., the telemetry circuitry and display circuitry are mounted on the same circuit board. (Col. 10, lines 10-13; col. 11, lines 38-41). Nelson et al. does not teach a programmer including two circuit boards, much less mounting the telemetry circuitry and the display circuitry on separate circuit boards. As a result, claims 2 and 23 are patentable over Fang et al. in view of Nelson et al.

Applicant further notes that with respect to the rejection of dependent claim 13, FIG. 4 of Fang et al. shows the display 32 and microprocessor 36 mounted on opposite sides of a single circuit board 38. This teaching in Fang et al. does not render obvious a configuration in which a display is mounted to a second circuit board on a side of the second circuit board opposite a first circuit board, as recited by Applicant's claim 13.

For at least these reasons, the Examiner has failed to establish a prima facie case for non-patentability of Applicant's claims 1-11, 13-30, and 32-35 under 35 U.S.C. 103(a). Withdrawal of this rejection is requested.

Rejection for Obviousness-type Double Patenting:

The Examiner provisionally rejected claims 1-6, 10, 11, 13, 14, 18, 20-30, 32 and 35 under the judicially created doctrine of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4-7, 9, 11, 20, 21, 23, 25-35 and 44 of copending Application No. 10/693,007.

The Examiner also provisionally rejected claims 1, 6, 8, 9, 22, 26, 34 and 35 under the judicially created doctrine of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 9, 10, 11, 19 and 20 of copending Application No. 10/693,011.

Applicant respectfully traverses the rejections. Applicants respectfully submit that the Examiner has not established a prima facie case of obviousness-type double patenting. To support an obviousness-type double patenting rejection, the Examiner must assess the differences between the claims in the pending application and the claims in the issued patent (or in the present case, in the co-pending patent applications). *In re Berg*, 46 USPQ2d 1226, 1229 (Fed Cir. 1998). In particular, the Examiner should indicate why the claims in an application are obvious over the claims in the granted patent. *Id.*

In the Office Action, the Examiner merely concluded that, “although the conflicting claims are not identical, they are not patentably distinct from each other because both applications claim a medical device programmer with a telemetry unit mounted on one separate circuit board and a display mounted on another and both include structure for mounting batteries within an aperture formed within the antenna.” Applicant notes that of the provisionally rejected claims, only claims 6 and 26 recite an antenna defining an aperture and a battery bay extending at least partially into the aperture. For that reason, Applicant respectfully disagrees with the Examiner’s rejection of claims 1-5, 10, 11, 13, 14, 18, 20-25, 27-30, 32, and 35 because the Examiner’s conclusion of patentable indistinction is inapplicable to those claims.

Applicant respectfully submits that the Examiner has failed to clarify the reasons why one skilled in the art would conclude that the invention defined in the claims at issue would have been an obvious variation of the invention defined in the claims of the reference, as required by Section 804 of the MPEP

For example, with respect to the rejection of Applicant’s independent claim 1 over independent claim 23 of copending Application No. 10/693,007, the Examiner failed to provide any reason why a programmer comprising an internal antenna and a display mounted within a housing as recited by Applicant’s claim 1 would have been obvious in view of the programmer recited in claim 23 of Application No. 10/693,007, which does not even recite an internal antenna or a display. Specifically, claim 23 recites:

- a first circuit board placed within a first housing member;
- a second circuit board placed over the first circuit board;
- a second housing member placed over the second circuit board to substantially enclose the first and second circuit boards;
- a loading port accessible via the second housing member to load instructions into memory on one of the first and second circuit boards; and

a plate member placed within the second housing member to cover the loading port, wherein the first housing member, the first circuit board, the second circuit board, the second housing member and the plate member are assembled in a stacked z-axis configuration.

The rejection for obviousness-type double patenting should be withdrawn. If the Examiner maintains the obviousness-type double patenting rejection, however, Applicants respectfully request clarification of the grounds of rejection.

CONCLUSION

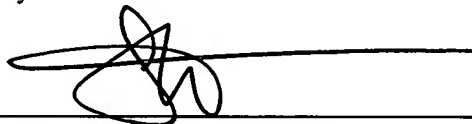
All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date:

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SHUMAKER & SIEFFERT, P.A.
8425 Seasons Parkway, Suite 105
St. Paul, Minnesota 55125
Telephone: 651.735.1100
Facsimile: 651.735.1102

By:



Name: Steven J. Shumaker
Reg. No.: 36,275